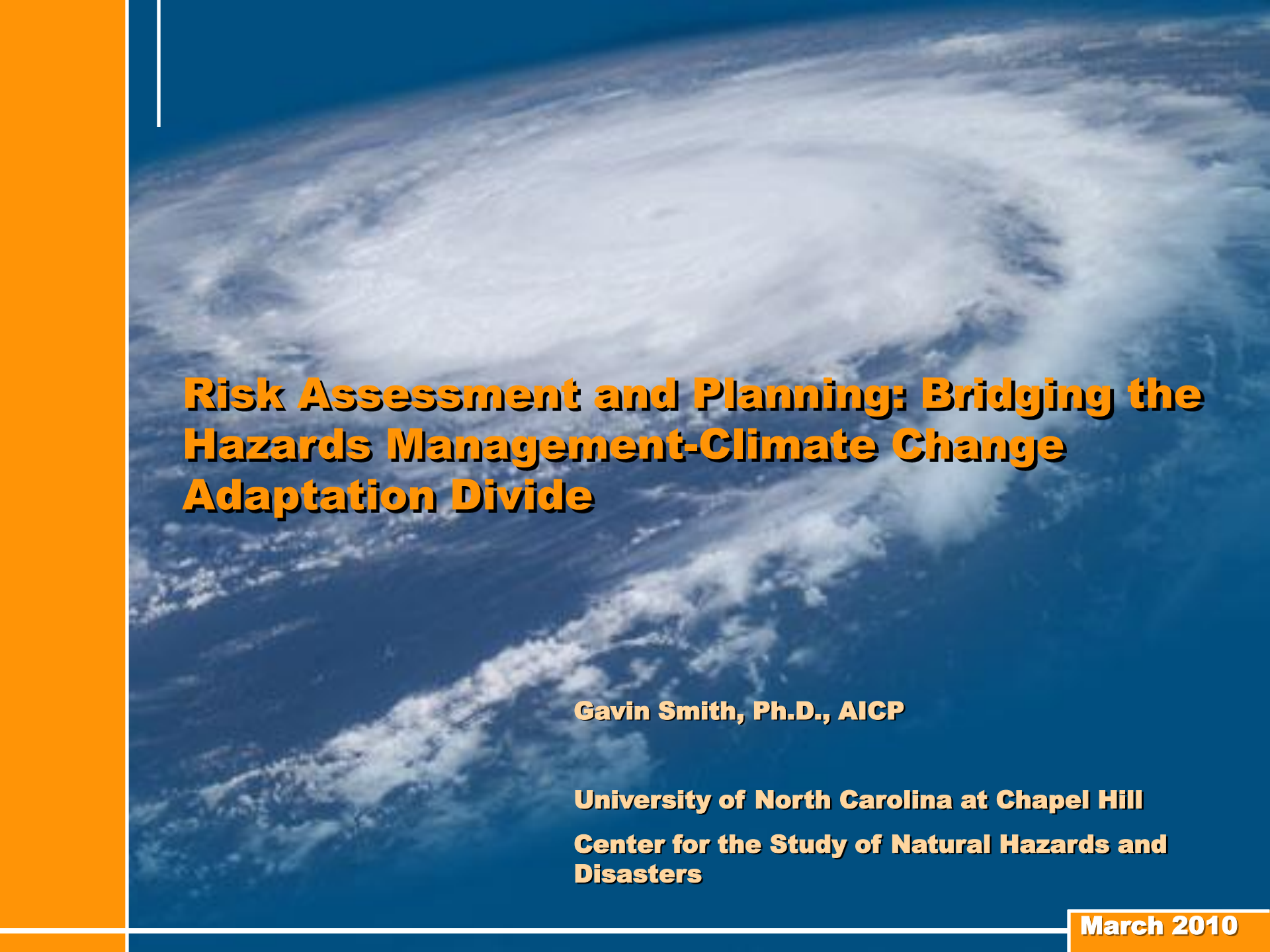

Risk Assessment and Planning: Bridging the Hazards Management-Climate Change Adaptation Divide

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Introduction

- **Opportunity for Collaboration**
  - Research and Practice
- **Natural Hazards Management and Climate Change Adaptation**
  - Hazard Mitigation
    - Policies, Programs and Plans
  - Disaster Recovery
    - Policies, Programs and Plans
  - Recommendations for Action

Research Findings

- **Study of Natural Hazards and Disasters**
  - Disasters by Design (Mileti 1999)
  - Facing Hazards and Disasters: Understanding Human Dimensions (National Research Council 2006)
  - **Hazards Research**
    - Meteorological Phenomena (Duration, Intensity, Frequency)
    - Hazard Vulnerability
    - Hazard Mitigation
  - **Disasters**
    - Disaster Response
    - Disaster Recovery
    - Social Vulnerability (Chicago Heat Wave)
    - Risk Communication
    - Building Performance
    - Disaster Myths
    - Issue Salience and Policymaking
    - Politics of Disaster
    - Planning

Practice of Hazards Management

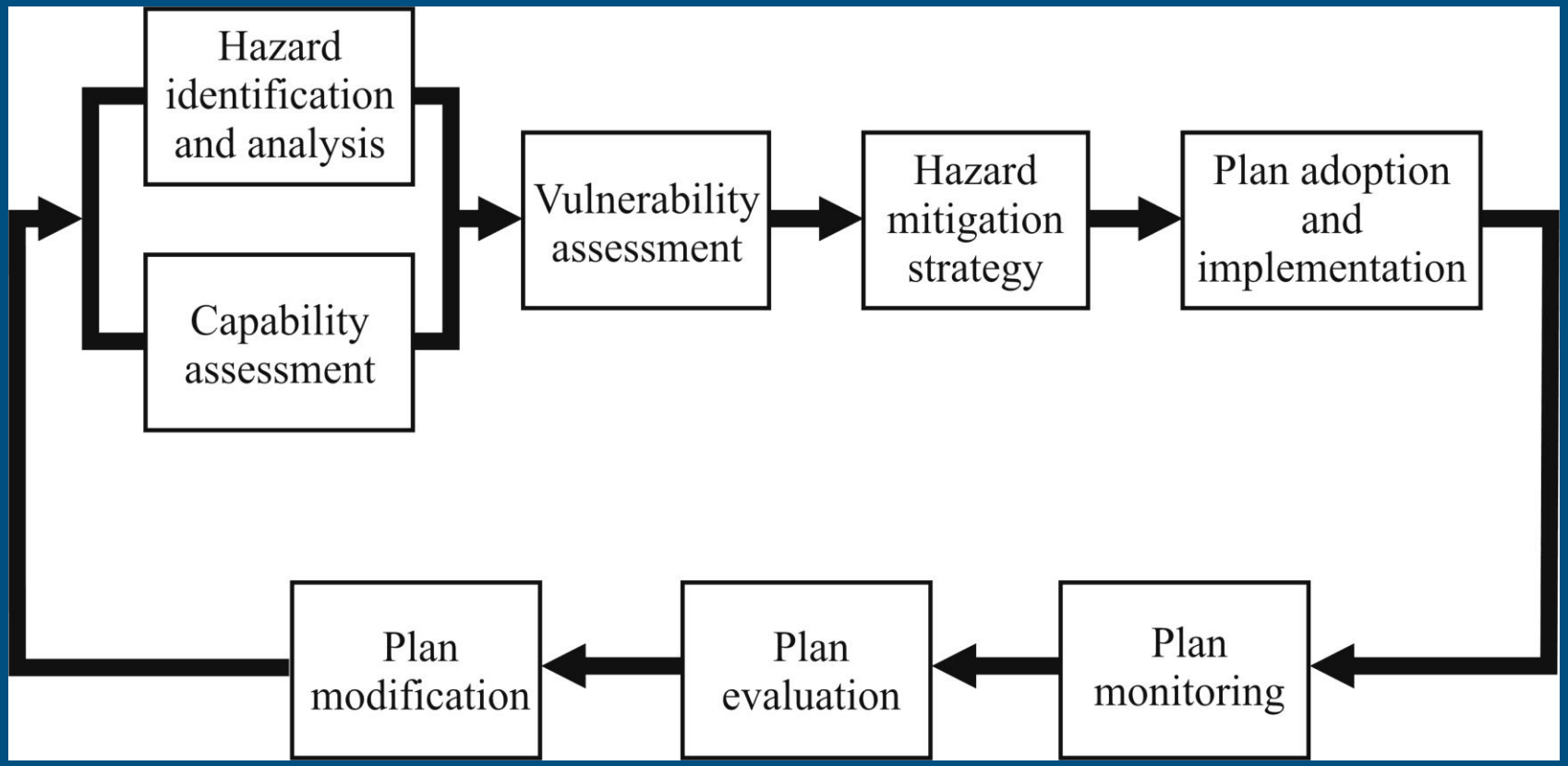
- **Natural Hazards versus Disasters**
  - **Disasters are a Human Construct**
- **Emergency Management and Hazards Management**
  - **Preparedness, Response, Hazard Mitigation, and Recovery**
  - **Emergency Manager/Land Use Planner Divide**

Hazards versus Disasters

Hazard Mitigation Policy

- **Disaster Mitigation Act of 2000**
  - State and Local Hazard Mitigation Planning
  - Pre-Disaster Mitigation/Hazard Mitigation Grant Program
  - Planning Guidelines
  - Policies and Projects
    - Land Use

Hazard Mitigation Planning Process



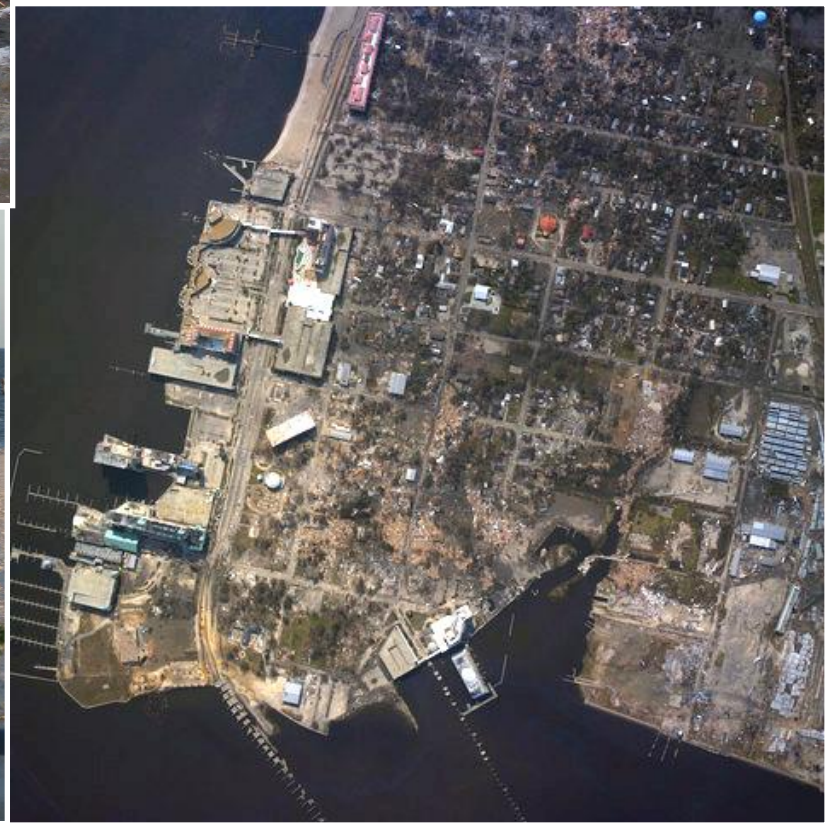
Hazard Mitigation / Adaptation Strategies

- Land Use Planning
- Risk Assessment
- Hazard Notification
- Public Investments
- Hardening Structures (levees, seawalls)
- Relocation/Retreat
- Land Acquisition
- Education and Outreach
- Elevation
- Building Codes

Hazard Mitigation Tools and Adaptation

- **Hazard Mitigation Grant Program**
  - Hurricanes Fran and Floyd (over 600 million dollars in hazard mitigation funding)
    - Acquisition and Relocation
    - Elevation
    - Relocation of Flood-prone Infrastructure
    - Relocation of Hog Farms and Junkyards
  - North Carolina Floodplain Mapping Program (flood hazard identification)
  - North Carolina Sea Level Rise Project
    - Adaptation Component

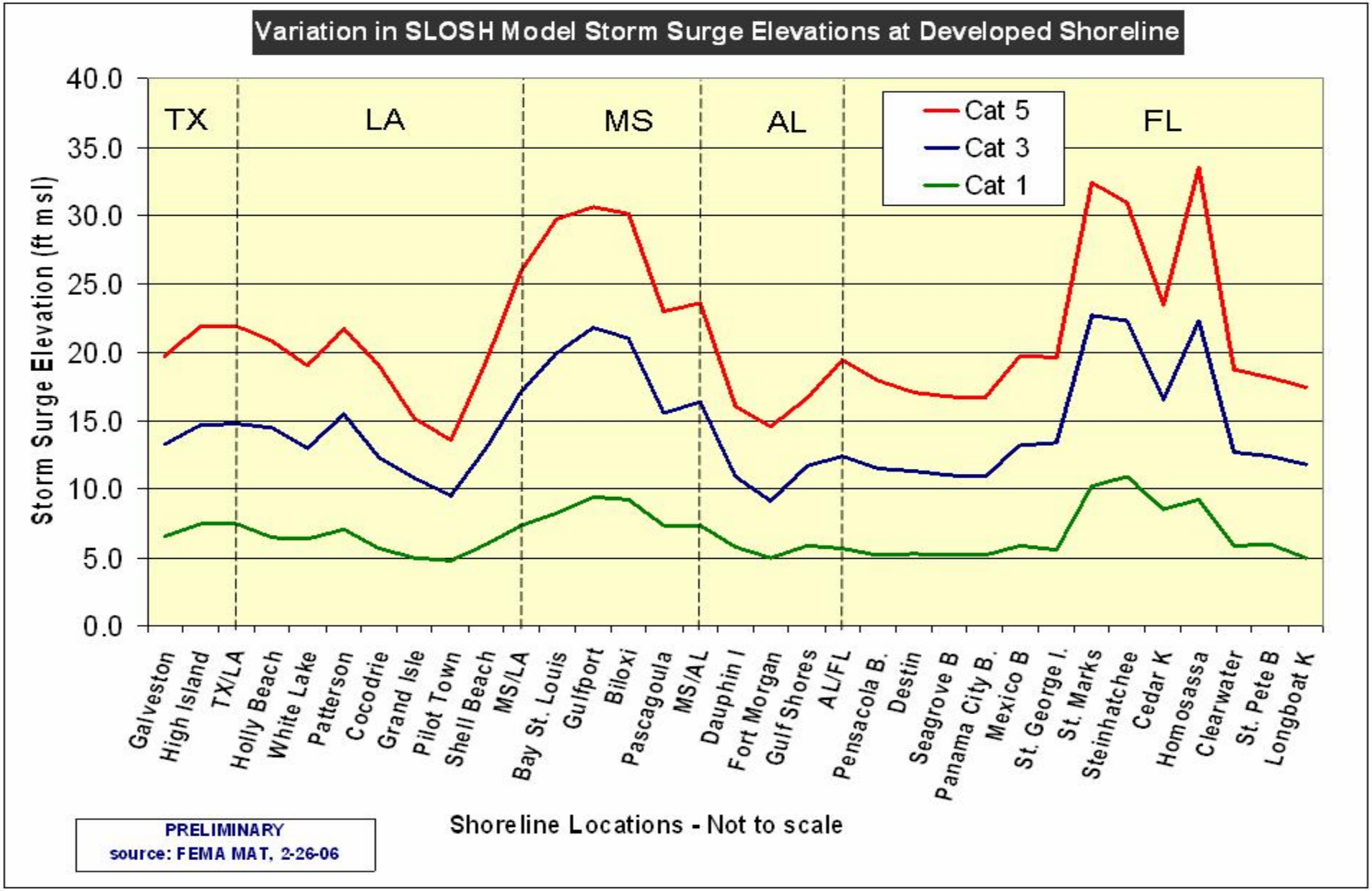
Disaster Recovery and Adaptation?



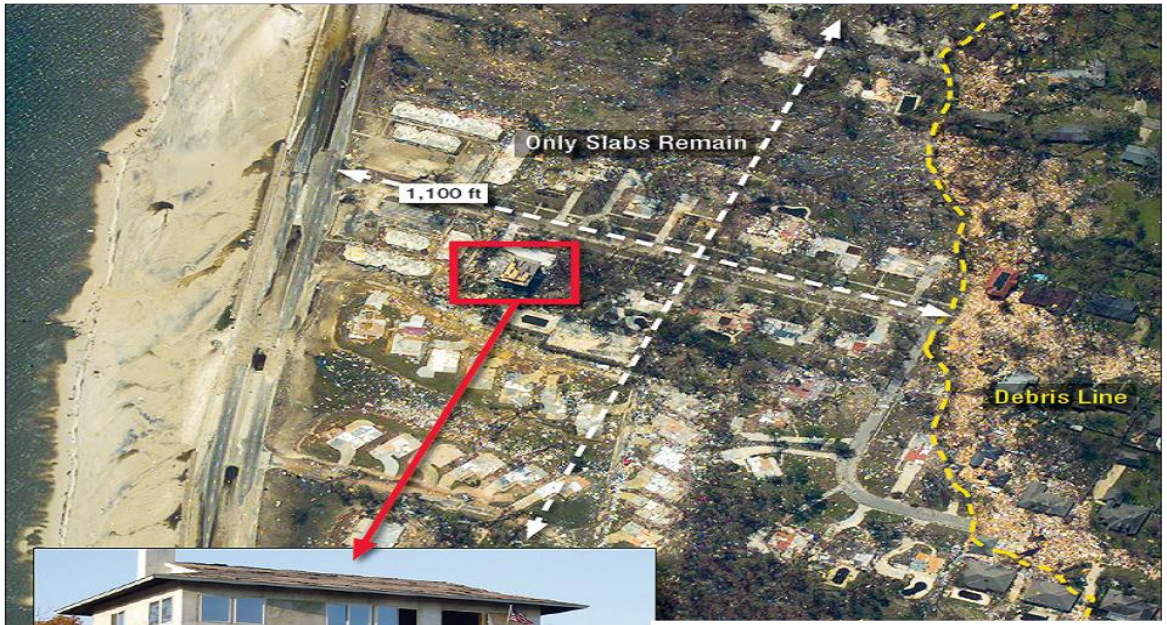
Assessing, Communicating and Assuming Risk

- Public Sector
  - Federal, State and Local
- Private Sector
  - Corporations
  - Small Business
  - Contractors
  - Developers
  - Media
- Private Non-Profits
  - Faith-Based Groups
  - National Organizations
  - Foundations
- Quasi-Governmental Organizations
  - Regional Planning Organizations
  - Professional Associations
  - Universities and Colleges
  - Community Development Corporations
  - Neighborhood Associations
- Emergent Groups and Individuals

Communicating Risk

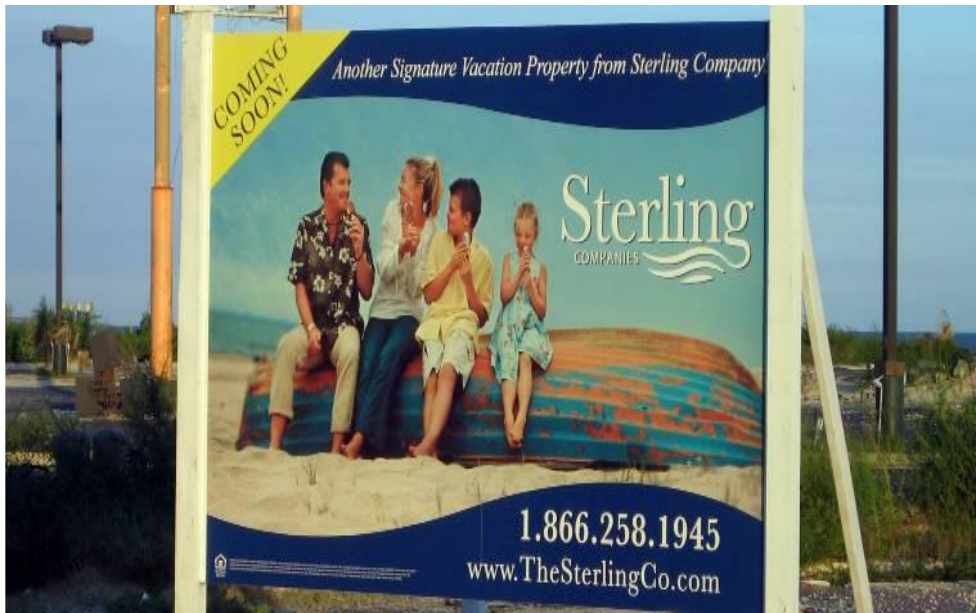


What is the Appropriate Design Standard?



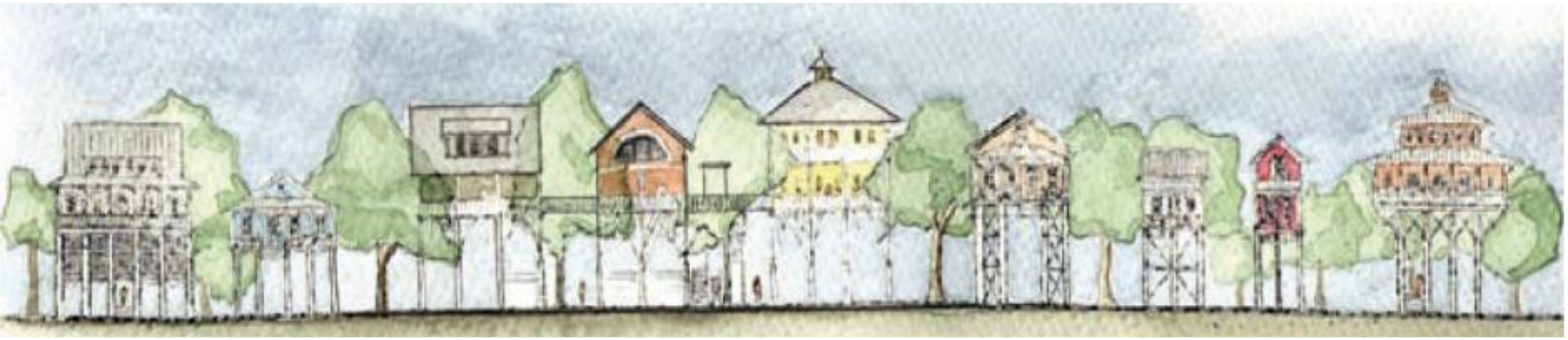
Geography of Disaster

Housing (temporary, transition, and resettlement)



Explaining Vulnerability in the Post-Disaster Environment

Risk and Post-Disaster Redevelopment



Risk and Policy Choices

Risk-Based Policymaking and Issue Salience

Risk, Sustainability and Disaster Resilience

- Can High-Risk Communities be Sustainable and Resilient?
- Market Behavior vs. Risk-Based Planning and Design
- Decreasing Social Vulnerability vs. Diverse Populations
- Linking Planning to Sustainable Development, Hazard Resilience, and Adaptation

Human Settlements, Risk and Climate Change: Are We Learning from our Mistakes?

Shoreacres, Texas Following Hurricane Ike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Recommendations for Action: Use the Tools We Already Have

- **Integrate Hazard Mitigation Plans and Climate Change Adaptation Plans**
  - State Level
  - Local Level
- **Pre-Event Planning for Post-Disaster Recovery**
  - Planning
  - Funding
  - Window of Opportunity to Enact Change
- **Multi-Objective Planning and Coalition Building**
  - Episodic versus slow onset, potentially catastrophic disaster (hazards are dynamic)
  - The Salience of Climate Change